

Name: _____

Test Date: _____

Endocrine System Packet

1. Compare and Contrast the nervous system and endocrine system.
2. What is a hormone?
3. What is a target cell or target tissue?
4. What is a receptor?
5. Explain how direct negative feedback works using an example.
6. Explain how the hypothalamus controls the endocrine system. Why is this called the 'master gland'?
7. What are the differences between RH and IH hormones?
8. What are antagonistic, synergist, intergrative and permissive effects of hormones?
9. The nervous system and the endocrine system are major regulating systems of the body. The nervous system is sometimes compared to express mail while the endocrine system is referred to as the pony express. Explain this comparison.
10. If hormones travel through the bloodstream, why don't all tissues respond to all hormones?

Answer the following case studies:

11. A 15 year old boy who still displays all the physical characteristics of boys 4-5 years younger than him and has not begun to show any developmental changes indicating he is becoming an adult.

Hormone(s):

Gland where produced:

12. A recently divorced middle-aged man who has also changed jobs and works long hours because he is stressed about receiving a promotion goes to the doctor because he has been gaining a lot of weight, especially in his abdominal region. The doctor notices that his face looks swollen and his blood-sugar levels are low. The doctor advises him to do some activities that will reduce stress and raise his metabolism in order to lose weight.

Hormone(s):

Gland where produced:

13. A patient comes into the ER complaining of a dizzy feeling. Doctors notice the patient has extremely low blood-sugar levels. Further testing reveals that the patient has a hypersecretion of ___ which is causing the problem so they prescribe and administer doses of the hormone ___ to counteract the body's hypersecretion.

Hormone(s):

Gland where produced:

14. A woman in her mid-20's has been having trouble falling asleep. Tests reveal that she has low levels of the hormone ____.

Hormone(s):

Gland where produced:

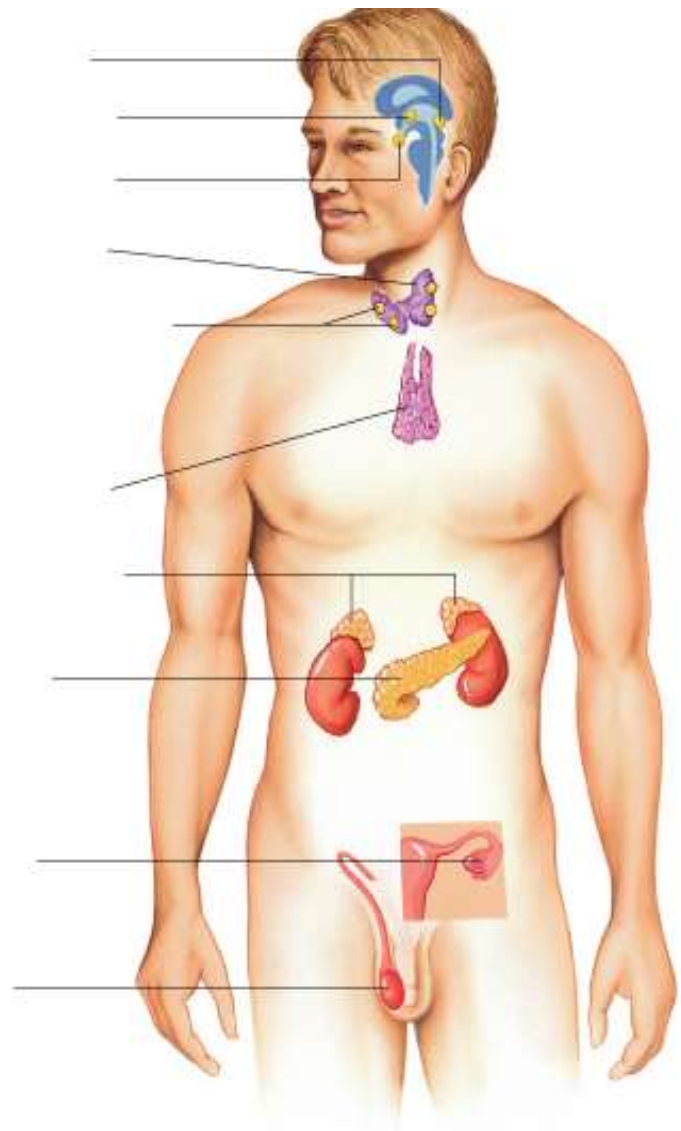
15. A woman brings her child into the doctor to determine the cause of the child's small stature and extremely slow growth rate. There is no hereditary history of dwarfism in the family.

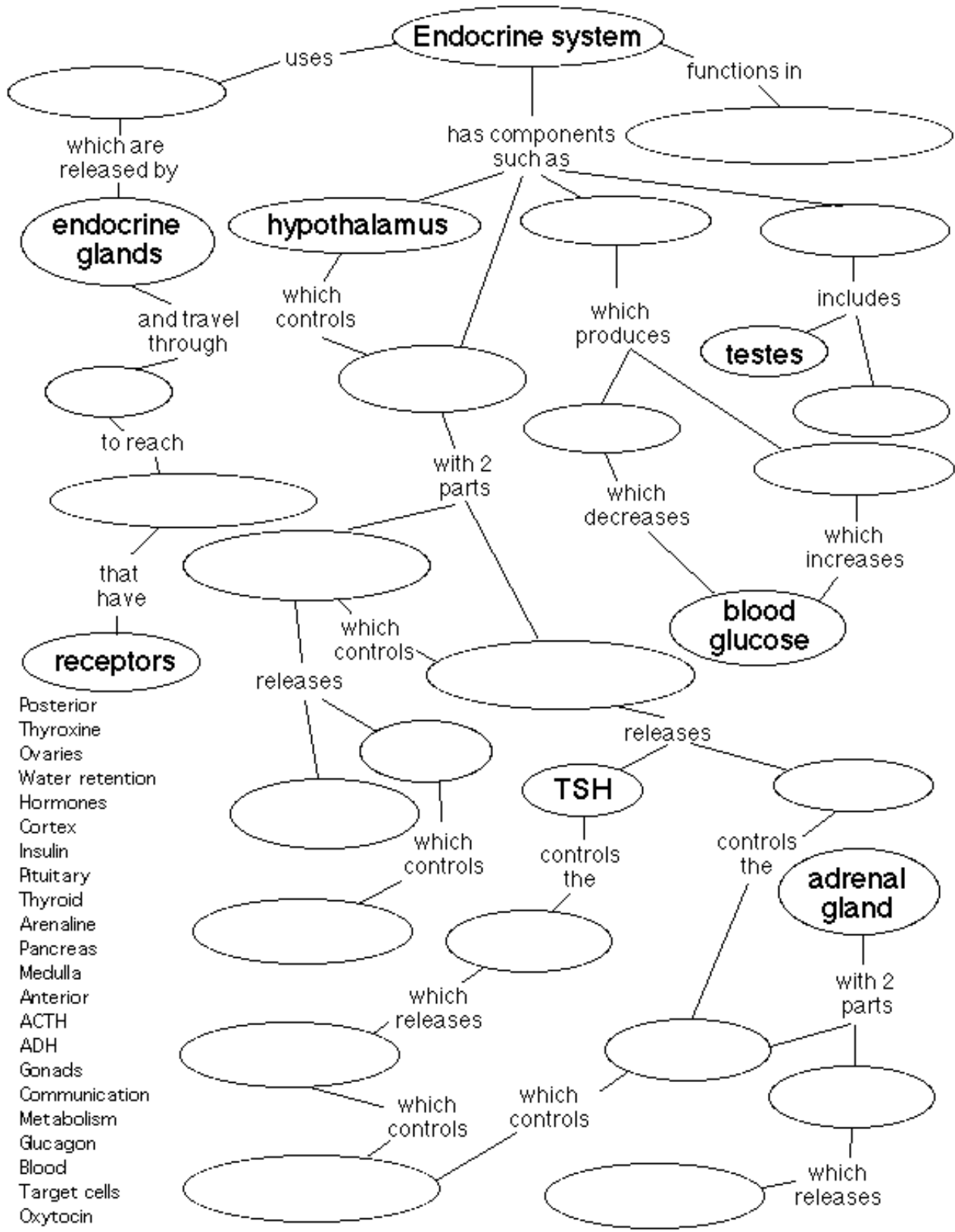
Hormone(s):

Gland where produced:

Identify the following glands and then label on the diagram:

16. Located in the throat _____
17. Gland that is largest during youth _____
18. Gland associated with blood sugar regulation _____
19. Found atop the kidneys _____
20. Gland producing male hormones _____
21. Gland producing female hormones _____
22. Glands found on top of the thyroid _____
23. Releases RH and IH targeting the pituitary _____
24. regulates sleep cycles _____
25. Found within the sphenoid bone _____





| Hormone | Gland/ Organ | Target | Effect |
|--------------------------------------|----------------|------------|--|
| 1. | | | Stimulates release of steroid hormones by the adrenal glands |
| 2 | | | Induces ovulation |
| 3. Thyroid Stimulating hormone | | | |
| 4 Follicle Stimulating hormone | | | |
| 5 | | | Production of milk |
| 7. Antidiuretic hormone | | | |
| 8. Calcitonin | | | |
| 9. T ₃ and T ₄ | | | |
| 10. Oxytocin | | | |
| 11 | | Skin | Stimulates Melanocytes |
| 12. Growth Hormone | | | |
| 13. | Parathyroid | | |
| 14. | | Most Cells | Increased cardiac activity |
| 15. | Adrenal cortex | Kidneys | |
| 16. | | | Sleep cycles |
| 17. | Kidneys | | Produces red blood cells |
| 18. Testosterone | | | |
| 19. Estrogen | | | |
| 20. | | | Develops and maintains immune functions |
| 21. | Ovaries | | Moves fertilized eggs |
| 22 | | | Lowers blood sugar |
| 23 | | | Raises blood sugar |
| 24 | Kidneys | | Stimulates absorption of calcium |
| 25. Renin | Kidneys | | |
| 26. RH and IH | Hypothalamus | | |
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